

and coassigned U.S. Application No. 09/217,389, filed December 21, 1998, entitled "A Recyclable Locking for Multi-Threaded Computing Environments," which has already been incorporated by reference. The mechanism uses the plurality of lock objects 206 to accomplish the locking of the objects 200 for exclusive or non-exclusive access by threads, as that term is known within the art.

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Please amend the paragraph beginning at page 13, line 24, to read as follows:

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Finally, the object recognition scheme 212 provides for the description of the plurality of objects. The description of objects is necessary so that functions such as application, programming interfaces (APIs) are able to determine whether a given object fits a given API. Such descriptions may include, for example, a hierarchical tree structure of object types, as known within the art, which require traversal to determine the description of a given object. However, in one embodiment, the scheme 212 utilizes a plurality of tokens 214, such that each object within the plurality of objects 200 is describable with a sequence of tokens, where each token relates to an attribute of the object, such as object type. Such token-based description is pursuant to description provided in the copending and coassigned U.S. Application No. 09/217,402, filed December 21, 1998, entitled "A Token-Based Object Description," which has already been incorporated by reference.

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Please amend the paragraph beginning at page 15, line 22, to read as follows:

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Referring now to FIG. 3, a flowchart of a method according to one embodiment of the invention is shown. In 300, a plurality of objects is stored via a dynamic object storage scheme, for example, as has been described in the previous section of the detailed description. In one embodiment, such storage is accomplished such that the objects are accessed utilizing a recyclable locking mechanism as described in the copending and coassigned U.S. Application No. 09/217,389, filed December 21, 1998, entitled "A Recyclable Locking for Multi-Threaded Computing Environments," which has previously been incorporated by reference.

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Please amend the paragraph beginning at page 16, line 17, to read as follows:

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In 304, finally, each of the plurality of objects is described utilizing an object recognition scheme, as has been described in the previous section of the detailed description. Such description provides for the testing of the objects against functions such as application programming interfaces (APIs), so that it can be determined efficiently whether a given object can be executed against a given API. In one embodiment, the object recognition scheme includes describing each of the objects as a series of tokens, where each token relates to an attribute of the object (for example, the type of the object), pursuant to the copending and coassigned U.S. Application No. 09/217,402, filed December 21, 1998, entitled "A Token-Based Object Description," which has already been incorporated herein by reference.

In the Claims:

Please amend Claims 1, 5, 9, and 14 as shown below:

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1. (Amended) An asynchronous programming environment, comprising:  
a dynamic object storage scheme for storing a plurality of objects;  
a dynamic dispatch scheme for invoking an action that belongs to one of a plurality of categories, the plurality of categories including needing one object, needing more than one object, and needing no object; and  
an object recognition scheme for providing a description of each object of the plurality of objects, the description allowing a determination of whether an object described by the description fits an application programming interface.

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5. (Amended) A method comprising:  
storing a plurality of objects via a dynamic object storage scheme;  
dispatching at least one of the plurality of objects via a dynamic dispatch scheme based on events from at least one of the plurality of objects, the dynamic dispatch scheme capable of